

Abstract of the Disclosure

In a burst-mode, high-speed spread-spectrum communications system, faster convergence of a receiver's automatic gain control (AGC) circuit reduces the time required to bring a received signal within the operating range of an operation amplifier and other radio-frequency and digital sections of the receiving system. A gain control circuit includes a coarse-gain feedback loop and
5 a fine-gain feedback loop to improve convergence speed and at the same time maintain the stability of the AGC circuit. The coarse-gain feedback loop quickly brings the received signal, using a large gain signal, to the desired operating range. The fine-gain feedback loop uses a smaller gain signal to gradually smooth the received signal to avoid saturation on the A/D
converters.